STATE OF SOUTH CAROLINA

STATE CHILD FATALITY ADVISORY COMMITTEE

2011 Provisional Report

(95 cases reviewed and closed of 169 total)

The Honorable Nikki R. Haley
Governor of the State of South Carolina
and the 120th South Carolina General Assembly

This report is supported by Child Fatality Data provided by the South Carolina Law Enforcement Division, Department of Child Fatalities, the South Carolina Budget and Control Board, Office of Research and Statistics, and the South Carolina Department of Health and Environmental Control. All opinions and recommendations are those of the State Child Fatality Advisory Committee (SCFAC).

This report may be viewed at the following web address:
http://www.scdhec.gov/health/chcdp/injury/child_fatality_advisory_committee.htm

Please address any questions in writing to the following address:
SCFAC
Chairperson
ATTN: Ms. Diane Shutters
PO Box 21398
Columbia, S.C. 29221

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South Carolina
State Child Fatality Advisory Committee

Letter from the Chairperson

Gratin Smith, M.D.

Dear Children's Health and Safety Advocates,

The purpose of the State Child Fatality Advisory Committee (SCFAC) is to decrease child deaths in South Carolina. Our goal is to use a multidisciplinary approach to investigate the causes of death of children from birth to 17 years of age to gain a better understanding of the circumstances surrounding each death. Recognizing child death risk factors will enable better use of existing resources and the creation of new practices to protect our children.

Regrettably, each year in our state many children die from both preventable and intentional causes. In 2011, there were **169** child deaths in South Carolina that were unexpected and unexplained and met criteria to be reviewed and closed by the SCFAC. This **provisional report** reflects information on the 95 cases that have been reviewed and closed by the committee as of June, 2013. The report gives information on Homicide, Suicide, Accidental, Natural, and Undetermined deaths among children. Our goal is to recognize patterns and trends in child deaths that will lead to prevention strategies.

A more complete preliminary report for 2011 will be developed after the SCFAC August 2013 meeting. The 2011 report will include information from the years 2007, 2008, 2009, 2010 and 2011 data.

A child's death is a tragedy that has a profound effect on families and communities. What can South Carolinians do to keep our children healthy, safe, and protected so they can grow into viable, productive young adults? We can create a safe nurturing environment in which our children can live, learn, and play. Child wellbeing is a shared responsibility that reaches every segment of our society.

Sincerely,

Gratin Smith, M.D.
Chairperson, SCFAC
SC Chapter, American Academy of Pediatrics

2011 South Carolina State Child Fatality Advisory Committee (SCFAC) Membership

Gratin Smith, M.D., SCFAC Chairperson
SC Chapter American Academy of Pediatrics

Agency/Organization	Representative	Contact Information
South Carolina Department of Social Services	Fairy M. "Cookie" Grant	SC Department of Social Services
South Carolina Department of Health and Environmental Control	Breanna Lipscomb	SC Department of Health and Environmental Control
South Carolina Department of Education	Kimberly Smith	SC Department of Education
South Carolina Department of Public Safety Criminal Justice Academy	Rita Yarborough	SC Department of Public Safety Criminal Justice Academy
State Law Enforcement Division	Emily Reinhart, Lt.	State Law Enforcement Division
South Carolina Department of Alcohol and Other Drug Abuse Services	Hannah Bonsu	SC Department of Alcohol & Other Drug Abuse Services
South Carolina Department of Mental Health	Renaye Long	SC Department of Mental Health
South Carolina Department of Disabilities and Special Needs	Jennifer Buster	SC Department of Disabilities and Special Needs
South Carolina Department of Juvenile Justice	Daniel Johnson	SC Department of Juvenile Justice
Attorney	(Vacant)	
County Coroner or Medical Examiner	Rae Wooten	Coroner, Charleston County
Pediatrician	Gratin Smith, M.D.	South Carolina Academy of Pediatrics
Solicitor	John Meadors	Fifth Circuit Solicitor
Forensic Pathologist	Amy Durso, M.D.	Palmetto Health Richland
Member of the Public	Laura Hudson	SC Crime Victims' Council

State Child Fatality Advisory Committee (SCFAC)
History and Mission

History:

The State Child Fatality Advisory Committee (SCFAC) was enacted in 1993. Since its enactment the committee has reviewed and closed 3,672 cases as of June 2013.

The SCFAC is mandated by S.C. Code 63-11-1950 to identify patterns in child fatalities that will guide efforts by agencies, communities and individuals to decrease the number of preventable child deaths.

As defined by S.C. Code 63-11-1910 and S.C. Code 17-5-540 a "child" means a person less than eighteen years of age. Any child death under the age of 18 is investigated when the death is unexpected and unexplained including, but not limited to, possible sudden infant death syndrome (SIDS), as a result of violence, when unattended by a physician or when occurring in any unusual or suspicious manner. The Committee does not review motor vehicle traffic deaths except as related to injuries on private property or injury involving a pedestrian. The South Carolina Department of Public Safety (SCDPS) investigates all motor vehicle traffic deaths. Failure of the state and community agencies to conduct adequate scene investigations and report child deaths in a timely manner impedes the effort to prevent future deaths from similar causes. In order to accurately identify trends and make recommendations, reporting and analysis is limited to the year of death.

The mission of the SCFAC is to decrease the incidence of preventable child deaths and make the public more aware of intentional child deaths by:

- Developing an understanding of the causes of child death;
- Developing plans for implementing changes within the agencies represented; and
- Advising the Governor and the General Assembly on statutory, policy and practice changes which will prevent child deaths.

It is our vision to prevent future deaths of children by developing an understanding of how and why children die in the State of South Carolina.

Dedication and Acknowledgements

Dedication

This report reflects the work of the numerous dedicated professionals of every community throughout the State of South Carolina who have committed themselves in gaining a better understanding of how and why children die. Their work is driven by a desire to protect and improve the lives of young South Carolinians. Each child's death represents a tragic loss for the family as well as the community. We dedicate this report to the memory of these children and to their families.

Acknowledgements

The members of the Committee recognize that without the participation and support of numerous organizations, agencies and individuals, committee activities and reports would not be possible. These acknowledgements represent a small part of the unified effort in SC to protect the health and safety of children.

The Committee wishes to thank the following organizations and individuals for their assistance and cooperation in compiling this report by providing data, statistical analysis or other pertinent information and support:

South Carolina Law Enforcement Division (SLED), Special Victims Unit
Major Patsy Lightle
Ms. Tahelia Wardlaw

South Carolina Coroners Association

Local Children's Health and Safety Councils and Child Death Review Teams

South Carolina Department of Health and Environmental Control (DHEC), Public Health Statistics and Information Services

Report Edited by:

Dr. Gratin Smith	SCFAC Chairperson; SC Chapter, American Academy of Pediatrics
Ms. Laura Hudson	SCFAC Co-Chairperson; SC Crime Victims Council
Ms. Jennifer Buster	SCFAC Member; Director of Children Services, SC Department of Disabilities and Special Needs
Ms. Lisa Hobbs	SCFAC Member; Perinatal Consultant, SC DHEC
Major Patsy Lightle	SLED, Special Victims Unit

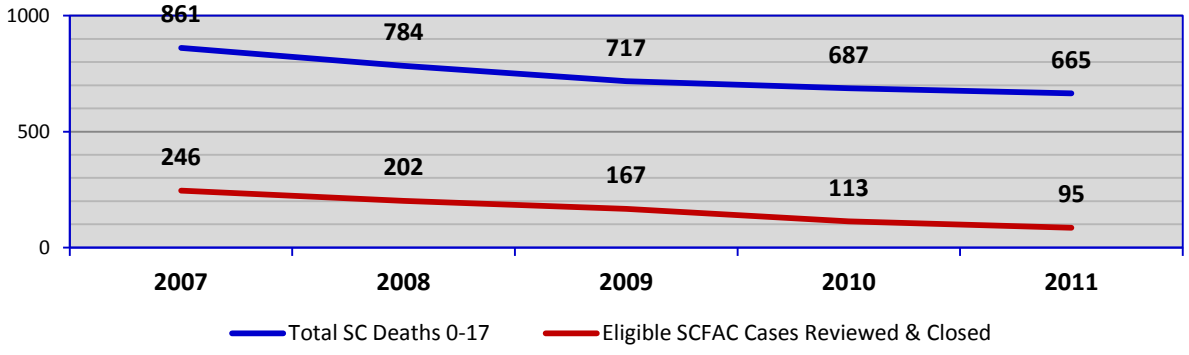
Report Prepared by:

Ms. Jill Varn	SC DHEC, Program Coordinator
Mr. Owens Goff	SC DHEC, Program Manager

I. Executive Summary

Mortality data provides an overall picture of child deaths by number and cause of death. It is from a careful study of every reported child death that we improve the response to and decrease the incident of child deaths.

Figure 1: 2007-2011
South Carolina Deaths 0-17 Years of Age
(Provisional 2011 Data: 95 of 169 Cases Reviewed and Closed as of June 2013)



The South Carolina Department of Health and Environmental Control (DHEC), South Carolina Community Assessment Network (SCAN) reports there were 665 fatalities in South Carolina to individuals 0 to 17 years of age in **2011**. Of these child fatalities, **169** *(25.4% of the total)* were eligible for review by the State Child Fatality Advisory Committee (SCFAC) based on the criteria established by legislative mandate of unexpected and unexplained deaths (Figure 1).

When a child dies, the response by the State and the community about the death must include an accurate and complete determination of the cause of death to include a thorough scene investigation and a complete autopsy. Lack of adequate investigations of child deaths impedes the effort to prevent future deaths from similar causes.

The Committee reviews approximately 200 cases annually which are presented by the State Law Enforcement Division (SLED) Special Victims Unit. Each case is reviewed and analyzed to develop an understanding of the causes and incidences of child deaths, implement changes and initiate action within agencies represented on the committee and propose changes in statutes, regulation, policies and procedures to ultimately prevent and reduce the number of child deaths in the state.

The Committee typically meets every other month and therefore has delayed data. Final determination may take 24 months before the committee reviews a case due to the volume of cases per year and the difficulty in getting investigations completed due to lack of agents. As a

result, statistical information for the Committee may not be available in a timely manner. Data from the Committee is based on SLED investigations and Committee reviews.

Table 1 provides an annual summary of the total cases assigned to the Committee from years 2006 to 2012, along with the cases reviewed and closed, as well as the cases pending review/closure. As of June 2013, the number of 2011 cases closed by the Committee totals 95 of 169 total cases.

Table 1: SCFAC Eligible Cases Reviewed and Closed, 2006 – 2012

Year	Cases Assigned	Cases Closed	Cases Pending Review	Percentage Closed
2006	196	191	5	97%
2007	258	246	12	95%
2008	228	202	26	89%
2009	194	171	23	88%
2010	182	121	61	67%
2011	**169**	**95**	**74**	**56%**
2012	138	17	121	12%
Note: Data reflects SCFAC efforts as of June 2013				

Table 2 provides a detailed summary of the manner of death of the 2011 cases reviewed and closed by the Committee as of June 2013.

Table 2: Analysis by Manner of Death of Cases Reviewed and Closed, 2011

Manner	Asian		Black		Hispanic		Native American		White		Other		Totals	
	M	F	M	F	M	F	M	F	M	F	M	F	Totals	%
Homicide		1	3	5	1			1	2	1			**14**	**15%**
Suicide						1			6	1	1		**9**	**9%**
Accidental			12	4	1	1			10	8	2	1	**39**	**41%**
Natural			9	1		2			5	1			**18**	**19%**
Undetermined			6	2		2			2	3			**15**	**16%**
Totals	**0**	**1**	**30**	**12**	**2**	**6**	**0**	**1**	**25**	**14**	**3**	**1**	**95**	**100%**

Table 3 provides a county-level detailed summary of the manner of death of the 2011 cases reviewed and closed by the Committee as of June 2013.

Table 3: County Mortality Data of Cases Reviewed and Closed, 2011

County	Accidental	Homicide	Natural	Suicide	Undetermined	Total
Aiken	3	0	0	0	0	3
Anderson	2	0	0	0	0	2
Bamberg	0	0	1	0	0	1
Barnwell	0	0	0	0	1	1
Beaufort	1	1	2	0	0	4
Berkeley	2	0	0	0	0	2
Charleston	1	1	2	0	0	4
Cherokee	2	0	0	1	0	3
Chesterfield	0	0	0	0	1	1
Clarendon	0	1	0	0	0	1
Colleton	0	1	0	0	1	2
Darlington	1	0	1	0	2	4
Dorchester	2	0	0	0	1	3
Florence	2	1	0	0	1	4
Greenville	4	1	2	3	1	11
Greenwood	1	0	1	0	0	2
Horry	3	1	2	0	0	6
Kershaw	0	0	0	0	1	1
Lancaster	1	0	1	0	0	2
Laurens	2	0	0	1	0	3
Lexington	4	0	0	0	0	4
Marlboro	0	1	0	0	0	1
McCormick	1	0	0	0	0	1
Oconee	1	0	0	0	0	1
Orangeburg	0	0	0	1	1	2
Richland	3	2	1	0	2	8
Saluda	0	0	0	0	1	1
Spartanburg	2	2	3	2	2	11
Sumter	0	1	0	0	0	1
York	1	1	2	1	0	5
TOTAL	**39**	**14**	**18**	**9**	**15**	**95**

II. 2011 SCFAC Recommendations

1. Homicide – The Committee along with the Joint Citizens and Legislative Committee on Children, recommends (1) the State Child Fatality Advisory Committee Law be changed to add an Ad Hoc Member from both the Senate and the House to the membership and (2) raising awareness in the State regarding Youth Violence and Child Maltreatment.
Action: (1) By December 30, 2013, the Committee, along with the Joint Citizens and Legislative Committee on Children, will develop and submit a letter to the legislature asking that the State Child Fatality Law be changed to add an Ad Hoc Member from both the Senate and the House to the membership (Senate 355 by Senator Hutto). **(2)** By December 30, 2013, the Committee, along with the Joint Citizens and Legislative Committee on Children, will develop and submit a letter to the legislature asking that there be more work and effort in place to raise awareness of Youth Violence and Child Maltreatment.

2. Suicide – The Committee recommends that schools raise awareness and educate students on the signs of suicidal intentions in students, to include information where students may go for help either for themselves or a friend that have displayed these signs. Also, educate students on bullying, cyber-bullying, and other circumstances at school that may be risk factors for suicide.
Action: By December 30, 2013, the Committee will begin working with the University of South Carolina, Children's Law Center to develop a Research to Practice, 1-day suicide prevention training event targeting school administrators and teachers to implement suicide prevention programs in schools.

3. Accidental
a. Drowning - Swimming Education – The Committee recommends (1) foster parents either know how to swim or be required to take swimming education classes; (2) raising education and awareness in the African American communities regarding swimming education and (3) the State Department of Natural Resources post *Danger of Drowning Signs, No Swimming* postings around ponds and rivers.
Action: (1) By December 30, 2013, the Committee will develop and submit a letter to the Department of Social Services recommending (a) all foster parents either know how to swim or be required to take swimming education classes and (b) raising awareness and education in the African American communities regarding swimming education. **(2)** By December 30, 2013, the Committee will develop and submit a letter to the State Department of Natural Resources requesting that *Danger of Drowning Signs, No Swimming* postings around all ponds and rivers.

b. Fire – The Committee recommends that each county adopt the current state law, through establishment of a county ordinance that requires a landlord to ensure their rental property, especially mobile homes and apartments, have working smoke alarms.
Action: (1) By December 30, 2013, the Committee will develop and submit a letter to the Governor of South Carolina and the General Assembly proposing that there be recurring state funds to support fire and life safety through a residential fire safety program and the purchase

of fire safety alarms. **(2)** By December 30, 2013, the committee will develop and submit a letter to each county legislative delegation encouraging the membership to support and enforce fire and life safety through the passage of a local ordinance that requires a landlord to ensure their rental property, especially mobile homes and apartments, have working smoke alarms.

c. Firearm - The Committee recommends (1) raising public awareness of the number of child deaths involving firearms, (2) all firearms are stored in a secure and locked safe with ammunition stored in a separate location and (3) parents should discuss the dangers of firearms with their children.
Action: By December 30, 2013, the Committee will develop a press release, which will be provided to local news media, regarding child deaths involving firearms.

d. Asphyxiation/Suffocation – The Committee recommends raising public awareness of the number of child deaths involving unsafe sleeping practices. Positional asphyxia happens when a person can't get enough air to breathe due to the positioning of his/her body. This happens most often in infants, when an infant dies and is found in a position where his/her mouth and nose is blocked, or where his/her chest may be unable to fully expand.
Action: (1) In January 2012, the Committee in partnership with the Children's Law Center and the Joint Citizens and Legislative Committee requested the Children's Trust of South Carolina form a statewide Safe Sleep Coalition to address rising rates of unsafe sleep practices that result in injury and death for children less than one year of age. The SC Safe Sleep Coalition presented the following recommendations to address unsafe sleep practices. These include strategies to be addressed through education, public awareness and appropriate policy modifications:
Data Recommendation: Synchronize data coding mechanisms to better address instances of Sudden Infant Death Syndrome and Sudden Unexplained Death Syndrome.
Education and Curriculum Recommendation: Development of universal, statewide training curriculum that will provide the latest best practices on safe sleep recommendations. Training will be geared to child care workforce, parents, extended family, pediatricians, and other individuals who may provide care for the infant.
Materials/Marketing Recommendation**:** Develop and implement a statewide public awareness campaign with targeted outreach to identified parents/primary caregivers and professional groups with the goal to grow familiarity with, use of, and education delivery on safe sleep practices.
Community Outreach Recommendation**:** Disseminate and assist with the implementation of the statewide public awareness campaign message and the education curriculum regarding safe sleep practices as appropriate to identified community sources.
Policy Recommendation**:** The Joint Citizens and Legislative Committee on Children, the General Assembly and the Governor's Office prioritize the promotion of safe sleep practices. Existing legislation can be modified to allow for educational materials on safe sleep to be presented prior to hospital discharge of a mother. The General Assembly should also designate a lead state entity for the continued promotion of safe sleep practices.

(2) By December 30, 2013, the Committee will develop a press release that will be provided to local news media regarding child deaths due to unsafe sleeping practices.

e. Transportation (Private Property Only) – The Committee recommends raising awareness with parents regarding safety measures with children using ATV's on private property**.**
Action: By December 30, 2013, the Committee, along with community partners, such as Safe Kids South Carolina will develop and submit a letter to the legislature requesting stricter laws to restrict and prohibit children under the age of 12 to operate or ride All-Terrain Vehicles, and that helmets be required at all times.

4. Natural
a. Sickle Cell Disease - The Committee recommends raising public awareness of Sickle Cell Anemia Disease, especially for those children that participate in sports. Young athletes with sickle cell disease traits are at high risk of dehydration, heat-related injury, exhaustion, painful episodes, and hip joint problems *(Al-Rimawi, & Jallad, 2008)*.
Action: In April 2013, the Committee submitted a letter to the South Carolina High School League, the South Carolina Association of School Administrators, the local Sickle Cell Foundation, and the South Carolina Medical Association requesting that all schools use the form that requires a response to any family history of sickle cell**.**

5. Undetermined – The Undetermined category includes cases that have been investigated but a manner of death cannot be determined based on the available information surrounding each case. Often, multiple causes are possible, but neither can be conclusively proven (ex: SIDS vs. Overlay vs. Intentional Suffocation).

The American Academy of Pediatrics defines Sudden Infant Death Syndrome (SIDS), as the sudden death of an infant under one year of age which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history. Sudden Unexplained Infant Death Syndrome (SUIDS) is the sudden and unexplained death of an infant in which the manner and cause of death are not immediately obvious prior to investigation. This includes infant deaths due to suffocation, asphyxia, poisoning, undetected metabolic or cardiac disorders, hypothermia and hyperthermia, as well as some abuse and neglect cases.

These definitions are used by review teams to determine if an infant's death occurred suddenly and unexpectedly in children younger than one year of age while not under the care of a medical professional. For these child deaths, manner and cause of death may not be immediately obvious prior to investigation.

Many sleep related infant deaths occur in a manner consistent with SIDS, but case investigation shows that the child was in a potentially unsafe sleep situation at the time of death. In these cases, it is not possible to rule out accidental suffocation, which means the diagnosis of SIDS or intentional suffocation could not be made. Therefore, the official cause of death is listed as "undetermined" following complete autopsy and thorough investigation.

The Committee recommends (1) increasing awareness and education of Sudden Infant Death Syndrome (SIDS) and Sudden Unexplained Infant Death Syndrome (SUIDS), (2) forensic pathologists continue using the American Academy of Pediatrics (AAP) definition of SIDS in determining the cause of death and (3) encouraging Coroners to use manner of death as undetermined, as SIDS is a definition of exclusion with an undetermined cause.
Action: The Committee, through its membership, will continue **(1)** enhancing levels of awareness in SIDS and SUIDS, **(2)** promoting the use of the AAP definition of SIDS among Forensic Pathologists and **(3)** advocating for Coroners to list manner of death as undetermined, as SIDS is a definition of exclusion with an undetermined cause.

III. Overview of Injury Deaths

South Carolina versus National

The top three leading causes of death in the United States[i] and in South Carolina in 2011 for adolescents and young adults ages 15 to 24 were unintentional injury, homicide and suicide. These causes are highly associated with behaviors such as not using seatbelts, being in a physical fight, carrying a weapon and making a suicide plan.

Youth violence includes a wide range of behaviors from bullying, slapping or hitting that may cause more emotional than physical harm to assault and robbery, with or without a weapon that can lead to serious injury or death. A young person may be involved in violence as the victim, the offender, or a witness. Violence is the second leading cause of death for young people in the U.S. between the ages of 10 and 24.[ii] Students who are victims of bullying are more likely to experience depression, suicidal thoughts, repeated common health problems, school absenteeism, psychological distress and feeling unsafe at school.

The disparities by age, race and gender related to violence highlighted in the South Carolina *2011 Youth Risk Behavior Survey* (YRBS)[iii], revealed the percentage of middle school students who have carried a weapon differs by race and gender. White males have the highest percentage, 58%, of carrying a weapon and black females have the lowest percentage, 11%, of carrying a weapon.

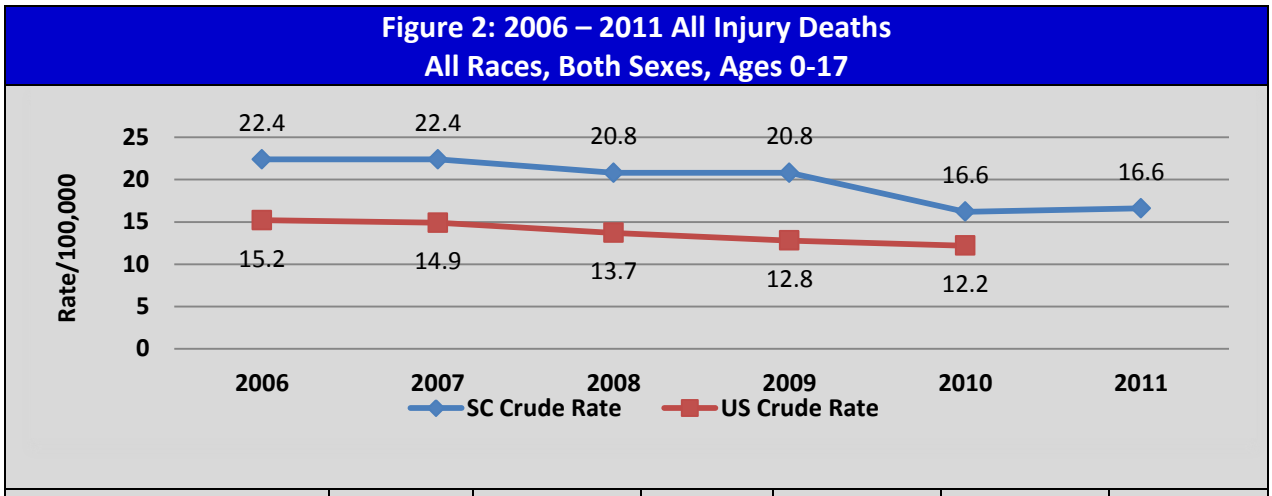
The disparities by age, race and gender related to safety at school highlighted in the 2011 YRBS revealed female high school students were more likely than male students to have been bullied on school property or who have been bullied electronically (through e-mail, chat rooms, instant messaging, web sites or texting).

Nationally, suicide is the third leading cause of death among adolescents ages 15 to 19.[iv] In South Carolina, suicide was the second leading cause of death in this age group in 2011.[v] Among young people 10 to 24 years of age, males are more likely than females to die from a suicide attempt, but more females than males try to kill themselves.

The disparities by age, race and gender related to suicide highlighted in the 2011 YRBS revealed older middle school students were more likely than younger students to have made a suicide plan. Female middle school students were more likely than male students to have seriously considered suicide, and female high school students were more likely than male students to have experienced symptoms of depression, considered suicide and made a suicide plan.

Though the injury mortality rate has been decreasing among children over the last five years, South Carolina remains higher than the national rate (Figure 2).

Figure 2: 2006 – 2011 All Injury Deaths, All Races, Both Sexes, Ages 0-17



	2006	2007	2008	2009	2010	2011
SC Injury Deaths	233	238	223	227	177	181
US Injury Deaths	11,244	11,039	10,147	9,481	9,028	

Crude rate refers to rates per 100,000 population
Data Source: US CDC WONDER, SC DHEC, Division of Biostatistics, SCAN

South Carolina – Fast Facts, SCDHEC, 2011 Injury Profile

In 2011, there were 3,284 total deaths in South Carolina due to all injury, intentional and unintentional – the crude death rate was 70.2 per 100,000 population.

There were 181 deaths among children 0 to 17 years of age (rate 16.6 per 100,000 population).

Among counties that had at least 20 deaths, the highest age-adjusted death rate was in Saluda County (25 total deaths, with a rate of 126 per 100,000 population). There was one death of a child 0 to 17 years of age in this same county.

The lowest age-adjusted death rate was in Dorchester County (63 total deaths, with a rate of 46 per 100,000 population). Of the deaths, 6 were of children 0 to 17 years of age.

The top 5 causes of injury deaths for all ages were: motor vehicle traffic, suicide, poisoning, homicide and falls (Table 4). The top 5 causes of injury deaths among children 0 to 17 years of age were: motor vehicle traffic, suffocation, homicide, suicide and drowning.

Table 4: 2011 South Carolina Causes of Injury Deaths

2011 South Carolina Causes of Injury Deaths					
All Ages			0 – 17 Years		
Cause of Injury	**No.**	**Rate**	**Cause of Injury**	**No.**	**Rate**
All Causes	**3,284**	**70.2**	**All Causes**	**181**	**16.6**
Motor Vehicle Traffic	800	17.1	Motor Vehicle Traffic	64	5.9
Suicide	652	13.9	Suffocation	25	2.3
Poisoning	527	11.3	Homicide	23	2.1
Homicide	354	7.6	Suicide	19	1.7
Fall	322	6.9	Drowning	16	1.5
Other specified, unspecified	199	4.3	Firearm	5	0.5
Suffocation	139	4.3	Undetermined	5	0.5
Fire or hot object	73	1.6	Fire or hot object	4	-
Drowning	58	1.2	Poisoning	4	-
Undetermined	36	0.8	Fall	3	-
Firearm	23	0.5	Struck by or against	3	-
Natural or environmental	21	0.4	Other specified, unspecified	3	-
Pedestrian, other	10	0.2	Natural or environmental	2	-
Struck by or against	10	0.2			
Legal intervention	5	0.1			
Machinery	4	-			
Pedal cyclist, other	3	-			
Cut or pierce	1	-			

Age specific rate per 100,000

--No rate generated for numbers less than 5

All Causes are Unintentional except suicide, homicide, legal intervention and undetermined intention

Data Source: SC DHEC, Division of Biostatistics, SCAN

IV. 2011 Child Death by Manner - Cases Reviewed and Closed

1. Homicide

Homicide – is the act or instance of unlawfully killing another human being, whether intentional or unintentional.[vi] Cases reviewed revealed that family members, through beatings and suffocations, commit most homicides of young children. Middle childhood is a time when a child's homicide risk is relatively low. Most homicides of teenagers involve male victims killed by male offenders using firearms, often gang and drug related. In 2011, South Carolina had a total of 354 homicides (rate of 7 per 100,000 population), 23 (rate of 2.1 per 100,000) of which were children 0 to 17 years of age, of these 23 cases, 14 needed further investigation.

2011 - SCFAC Case Review	
Cases Assigned:	169
Cases Closed:	95
Homicide:	14

Homicide by Child Abuse - In the event that a child dies, immediate circumstances surrounding the death do not always define that a homicide has occurred. Through a thorough investigation and an autopsy, other evidence is attained which strongly suggests that the death is in fact, homicide by child abuse.

Fatal child abuse may be the result of abuse recurring over time. The incidence of child abuse appears to be associated with other social problems, such as domestic violence, substance abuse, multiple stresses on families, and poverty. Child maltreatment deaths occur in the greatest numbers among infants, followed by toddlers and preschool children. Children younger than 6 years of age are most vulnerable because of their small size, incomplete verbal skills, and limited contact with adults other than their primary caregivers (Herman-Giddens, 2001).

A mother and her children had recently moved to SC to be with the mother's boyfriend. Services for the 3 year old, with disabilities, were no longer sought for the child by the mother. The child was not seen by family, DSS or neighbors. When the child was taken to the ER, it was determined that the child had been abused, including burns to genitals, teeth aggressively pulled, head shaved and bruises all over the body. In addition, the 3 year old had an infection and never received medical attention. The manner of death was homicide. Both the mother and boyfriend were charged.

In most cases infant homicides occur when the child is in the care of a known perpetrator. Some injuries are the result of deliberate intent to do harm such as beating, suffocation, strangulation, severe inflicted burns, scalding, and the use of a weapon. Some fatal injuries may have no external signs of trauma such as abusive head trauma.

Young children killed by their parents are most often beaten, shaken, or suffocated to death. Older maltreatment fatality victims, especially teenagers, are more likely to be killed with guns or other weapons (Herman-Giddens, 2001).

Shaken Baby Syndrome/Abusive Head Trauma (SBS/AHT) is a term used to describe the constellation of signs and symptoms resulting from violent shaking or shaking and impacting of the head of an infant or small child.[vii] The resulting whiplash effect can cause bleeding within the brain or the eyes.[viii]

According to the Center for Disease Control and Prevention's (CDC) Injury and Violence Prevention: Traumatic Brain Injury, nearly all victims of SBS suffer serious health consequences and at least one of every four babies who are violently shaken dies from this form of child maltreatment.

Prevention Points:[ix]

- **Family Violence:** Most homicides occur between family members, friends and neighbors. Often they involve infants who are killed when emotions are running high and restraint of those emotions is not exercised.
- **Young Children:** Child abuse homicide often occurs in younger children. Inexperienced and frustrated caregivers, often without any parental training, cause the death of a child. Abusive head trauma is an example of how impact or violently shaking a baby can cause serious or fatal trauma to the child's brain. Caregivers should be mindful of a child's capabilities and susceptibility. Child care education can be provided at all points of contact with parents and caregivers.
- **Signs of Child Abuse:** It is important to pay attention and familiarize yourself with signs of child abuse. It is equally important to use common sense in trying to determine if a child is being abused. Normal, active children get bruises and bumps from everyday play. These bruises are most often over bony areas such as the knees, elbows, and shins. However, if a child has injuries on other parts of the body such as the stomach, cheeks, ears, buttocks, mouth, or thighs; consider the possibility that the child is being abused; particularly if the appearance of the injury does not correlate to the child's account of the event. Black eyes, human bite marks, and round burns the size of a cigarette should be highly suspicious and reported to the appropriate authorities. SC Code of Law 63-7310-50.
- **Gang Violence:** ***How can you keep your child from joining a gang?*** Educate yourself about gang and drug activity in your community. Know where your child is and be aware that 3-6 p.m. is not a safe time to leave your child unsupervised. Demonstrate love and acceptance at home since many kids join gangs to feel a sense of connection and approval. Get your child involved in quality, out of school activities, such as sports, music or art. Volunteer at your child's school. Establish strong parental rules; set limits; be consistent, firm, and fair. Get to know your child's friends and their parents. Listen to

your child. Talk with your child. Show respect for your child's feelings and attitudes. Do not buy or allow your child to buy gang-style clothing.

- **Shaken Baby Syndrome: How Can SBS Be Prevented?** Research shows that shaking most often results from crying or other factors that may trigger the person caring for the baby to become frustrated or angry. The fact is that crying—including long bouts of inconsolable crying—is normal developmental behavior in infants. The problem is not the crying; however, it's how caregivers respond to it. Picking up a baby and shaking, throwing, hitting, or hurting him/her is never an appropriate response. Everyone, from caregivers to bystanders, can do something to prevent SBS. Giving parents and caregivers tools to know how they can cope if they find themselves becoming frustrated are important components of any SBS prevention initiative. You can play a key role in reinforcing prevention through helping people understand the dangers of violently shaking a baby, the risk factors and the triggers for it, and ways to lessen the load on stressed out parents and caregivers. All of which may help to reduce the number of children impacted by SBS.

Resources:

- Brady Campaign to Prevent Gun Violence - http://www.bradycampaign.org
- CDC Division of Violence Prevention - http://www.cdc.gov
- Center for the Prevention of School Violence - http://www.ncdjjdp.org
- National Center on Shaken Baby Syndrome – http://dontshake.org

2. Suicide

Suicide – the act or an instance of taking one's own life voluntarily and intentionally.

2011 - SCFAC Case Review	
Cases Assigned:	169
Cases Closed:	93
Suicide:	9

There are often stressors associated with the completion of suicide. Feelings of despair and helplessness contribute to the lack of desire to live. Suicide can possibly be linked to a clinical diagnosis of depression, bipolar disorders, and substance abuse. Yet, often time's risk factors of suicide can go undiagnosed, untreated or ignored. Suicides are more common than previously perceived.

Children who experience violence, drug and alcohol addiction, poverty, sexual, physical, and/or emotional abuse have much higher risk for suicide. Many times suicides happen because the existing problem in a child's life is perceived to be insurmountable without resolution and that the current situation will last forever. Despite the fact that research indicates more females attempt suicides, more males actually complete suicides. A prior suicide attempt is an important risk factor for an eventual completion. There are risk factors and warning signs for suicide.

Information from the *2011 SC Youth Risk Behavior Survey*, South Carolina State Department of Education reports:

- 20% of middle school students have seriously considered suicide, 12% have made suicide plans, and 8% have tried to kill themselves.
- 16% of high school students seriously considered suicide, 14% made a suicide plan, 11% attempted suicide, and 4% made a suicide attempt that resulted in injury, poisoning or overdose that required treatment by a doctor or nurse.
- Older middle school students were more likely than younger students to have made a suicide plan, and female middle school students were more likely than male students to have seriously considered suicide.

A 17 year old male had just received information that he was not going to complete high school with the rest of his friends and he had become depressed. He had also been kicked off the baseball team recently, due to his failing grades. On the way home from school, he was ticketed for rolling through a stop sign. When he got home he told his mother about the ticket and she became upset with her son. She took his keys and told him he could ride the bus for the remaining school year. The teenage boy went to his room. Fifteen minutes later the mother heard a gunshot; she went to her son's room and found him dead. Gunshot wound to the head.

- Female high school students were more likely than male students to have experienced symptoms of depression, considered suicide, and made a suicide plan.
- The percentage of high school students who experienced symptoms of depression (past 12 months) increased significantly from 25 percent in 2009 to 31% in 2011.
- The percentage of high school students who seriously considered suicide (past 12 months) decreased from 26% in 1991 to 16% in 2011.
- The percentage of high school students who made a suicide plan (past 12 months) increased slightly from 11 percent in 2009 to 14 percent in 2011.

Prevention Points:[x]

- **Early Diagnosis and Treatment:** Early involvement of mental health professionals may prevent suicide attempts. Special caution should be taken with children who are taking anti-depressant medication as health officials have issued warning that these medications might increase the risk of hostility, mood swings, aggression and suicide in children or adolescents.
- **Observations:** Watch for changes in a young person's psychological state (increase in rage, anxiety, depression, or hopelessness), withdrawal, reckless behavior, or substance use.
- **Evaluation of Thinking:** ***Do not ignore statements about suicide, even if they seem casual or fake.*** The months following a suicide attempt or severe depression can be a time of increased risk, no matter how well the child seems to be doing. This is a critical time for family interaction and securing family support systems.
- **Limit Access to Fatal Agents:** Easily obtained or improperly secured firearms and other weapons are often used in suicides. The harder it is for children to put their hands on

these items, the more likely they are to rethink their intentions, allowing time for someone to intervene.

- **Talk about Issues:** Bringing up suicide does not "give kids the idea", but rather gives them the opportunity to discuss their thoughts and concerns. This communication can be a significant deterrent.

Resources:

- "Suicide Prevention: Youth Suicide". Centers for Disease Control and Prevention. http://www.cdc.gov/ViolencePrevention/pub/youth_suicide.html
- American Academy of Pediatrics – http://www.aap.org
- Youth Suicide Prevention Program – http://www.yspp.org
- American Foundation of Suicide Prevention – http://www.afsp.org
- KidsHealth – http://www.kidshealth.org
- Out of the Darkness – http://www.outofthedarkness.org

3. Accidental

Drowning - suffocation by submersion especially in water. The CDC reports that about ten people die daily from unintentional drowning, and that drowning ranks 5th among the leading causes of unintentional injury death in the United States. Of this daily number, two are children aged 14 or younger.

The mother of a 2 year old drowning victim stated, "I just stepped out of the kitchen for a minute to the laundry room to get the clothes out of the washer and put them in the dryer. When I returned, the outside door was open to the swimming pool and I discovered my child floating face down in the pool. I was only away a few minutes."

Who are most at risk? CDC reports that nearly 80% of people who die from a drowning are male. Children ages 1 to 4 have the highest drowning rates. In 2009, among children 1 to 4 years of age who died from an unintentional injury, more than 30% died from drowning. Among children ages 1 to 4 years of age, most drowning deaths occur in home swimming pools. Drowning is responsible for more deaths among children 1-4 years of age than any other cause of death, except congenital anomalies (birth defects). Among those 1 to 14 years of age, fatal drowning remains the second leading cause of unintentional injury-related death behind motor vehicle crashes. Between 2005 and 2009, the fatal unintentional drowning rate for African Americans was significantly higher than that of Caucasians across all ages. The disparity is widest among children 5 to 14 years of age. The fatal drowning rate of African American children ages 5 to 14 is almost three times that of Caucasian children in the same age range.

2011 - SCFAC Case Review	
Cases Assigned:	169
Cases Closed:	93
Drowning:	10

The South Carolina Department of Health and Environmental Control's, SCAN reports that in 2011 the state suffered 58 drowning deaths with 16 occurring in the 0 to 17 years of age population group.

What are the factors influencing drowning risk? The main factors that affect drowning risk are (a) lack of swimming ability with many adults and children reporting that they cannot swim, (b) lack of barriers (e.g., pool fencing, locked gates) to prevent unsupervised water access by children, (c) lack of close supervision while swimming or bathing, (d) failure to wear life jackets, (e) alcohol use among adolescents and adults since it influences balance, coordination and judgment and the effects heightened by sun exposure and heat, and (f) seizure disorders with the bathtub as the site of highest drowning risk.

Prevention Points:[xi]

- **Learn life-saving skills:** Everyone should know the basics of swimming (floating, moving through the water) and cardiopulmonary resuscitation (CPR).
- **Fence it off:** Install a four–sided isolation fence, with self–closing and self–latching gates, around backyard swimming pools. This can help keep children away from the area when they aren't supposed to be swimming. Pool fences should completely separate the house and play area from the pool.
- **Make life jackets a "must":** Make sure children wear life jackets in and around natural bodies of water, such as lakes or the ocean, even if they know how to swim. Life jackets can be used in and around pools for weaker swimmers too.
- **Be on the lookout:** When kids are in or near water (including bathtubs), closely supervise them at all times. Adults watching kids in or near water should avoid distracting activities like playing cards, reading books, talking on the phone, and using alcohol or drugs.

Resources

- Centers for Disease Control and Prevention - http://www.cdc.gov
- Safe Kids Worldwide – http://www.safekids.org
- American Academy of Pediatrics – http://www.aap.org
- American Red Cross – http://www.redcross.org

Fire – is a chemical change that releases heat and light and is accompanied by flame. Nationally, and within the State of South Carolina, it is residential fires that cause many casualties.

According to the 2010 "Fire Lose in the US " report

2011 - SCFAC Case Review	
Cases Assigned:	169
Cases Closed:	93
Fire:	3

from the National Fire Protection Association, fire departments responded to 482,000 home fires in the United States that claimed the lives of 3,120 people and injured another 17,720 not including firefighters.[xii]

In the US, at least 80% of all fire related deaths occur in the home. They are most commonly associated with cooking, smoking, electrical malfunctions involving overloaded circuits or makeshift wiring, and children playing with matches. The second leading cause of residential fires and the major cause of fire in commercial properties is arson. The third leading cause of home fires is a faulty heating system; individual homeowners are less likely to have their heating systems maintained than apartment owners. Having working fire alarms dramatically increases the chances of surviving a fire at home.

"I left food cooking on the stove while I stepped out of the house for a few minutes to speak to my neighbor," stated the mother of three small children killed as a result of a cooking related fire. There were no operable smoke detectors found in the home.

According to CDC, Injury and Violence Prevention, Home Safety Information, children from low income families are at greater risk of fire-related death due to lack of working smoke alarms, sub-standard housing, use of alternative heating sources and being left unattended due to unaffordable or inaccessible child care while parents work.

- From 2008 to 2011, there were 275 fire related fatalities in South Carolina with 34% occurring in either a mobile home or an apartment complex.
- From 2008 to 2011, the months of January, February, March and December were the most deadly, accounting for 144 (52%) of the state's 275 total fire fatalities.
- From 2008 to 2011, Charleston, Lexington and Spartanburg Counties have had the highest number of fire fatalities.
- From 2008 to 2011, the population age of 20 and under has experienced 40 fire related deaths.[xiii]

"Primary prevention directed at fire and life safety is critical", states Tony Signorino, Fire Prevention Officer from Lexington County. "In the past, some families have not been so lucky. In 2009, we experienced the worst loss of life ever with a total fire death count of eleven residents with six being children. All except one of these were in mobile homes with no working smoke alarms. Shortly after these terrible tragedies, we started a campaign in our two hundred plus mobile home parks located throughout our community. We found that many of these rental units were not protected with working smoke alarms. As a result of this campaign, there were a few families who escaped their home during fires due to being alerted by a smoke alarm we recently installed and we happily experienced no fire related deaths in 2010".

Prevention Points:[xiv]

- Keep all matches and lighters out of the hands of children. If possible, keep these sources of fire in locked drawers. Consider buying only "child-proof" lighters—but be aware that no product is completely child-proof.
- Children as young as two years old can strike matches and start fires.
- Never leave children unattended near operating stoves or burning candles, even for a short time.
- Teach children not to pick up matches or lighters they may find. Instead, they should tell an adult immediately.
- Smoke alarms should be installed on every level of the home, especially near sleeping areas.
- Smoke alarms should be kept clean of dust by regularly vacuuming over and around them.
- Replace batteries in smoke alarms at least once a year. And replace the entire unit after ten years of service, or as the manufacturer recommends.
- Families should plan and practice two escape routes from each room of their home.
- Regularly inspect the home for fire hazards.
- If there are adults in the home who smoke, they should use heavy safety ashtrays and discard ashes and butts in metal, sealed containers or the toilet.
- If there is a fireplace in the home, the entire opening should be covered by a heavy safety screen. The chimney should be professionally inspected and cleaned annually.
- Children should cook only under the supervision of an adult or with their permission.
- Children should never play with electrical cords or electrical sockets. They should ask adults for help plugging in equipment.
- Children should stay away from radiators and heaters, and they should be taught that these devices are not toys. Young children in particular must be taught not to play with or drop anything into space heaters. Nothing should be placed or stored on top of a heater.
- Pots on stovetops should always have their handles turned toward the center of the stove where children cannot reach up and pull or knock them over onto themselves.
- Teach children to turn off lights, stereos, TVs and other electrical equipment when they are finished using them. In the case of room heaters, children should ask an adult to turn it off when the room will be empty.
- Children should never touch matches, lighters or candles. If they find matches or lighters within reach, they should ask an adult to move them.
- No one should stand too close to a fireplace or wood stove or other types of heaters, where clothes could easily catch fire.

Resources:

- US Fire Administration - http://www.usfa.fema.gov/kids/discuss/index.shtm

- SC Department of Labor, Licensing and Regulation: Office of State Fire Marshal http://scfiremarshal.llronline
- The National Child Traumatic Stress Network (NCTSN) – http://nctsn.org
- Centers for Disease Control and Prevention - http://www.cdc.gov/HomeandRecreationalSafety/Fire-Prevention/tools.html

Firearm – is a weapon, especially a pistol or rifle, capable of firing a projectile and using an explosive as a propellant. According to Safe Kids Worldwide, exposure to guns and access to a loaded firearm increases the risk of unintentional firearm-related deaths and injury to children. Unrealistic perceptions of children's capabilities and behavioral tendencies with regard to guns are common. These include misunderstanding a child's ability to gain access to and fire a gun, distinguish between real and toy guns, make good judgments about handling a gun and consistently follow rules about gun safety. Promoting the safe storage of firearms in the home and reducing their availability and accessibility are important steps in preventing unintentional firearm-related death and injury among children.

2011 - SCFAC Case Review	
Cases Assigned:	169
Cases Closed:	93
Firearms:	4

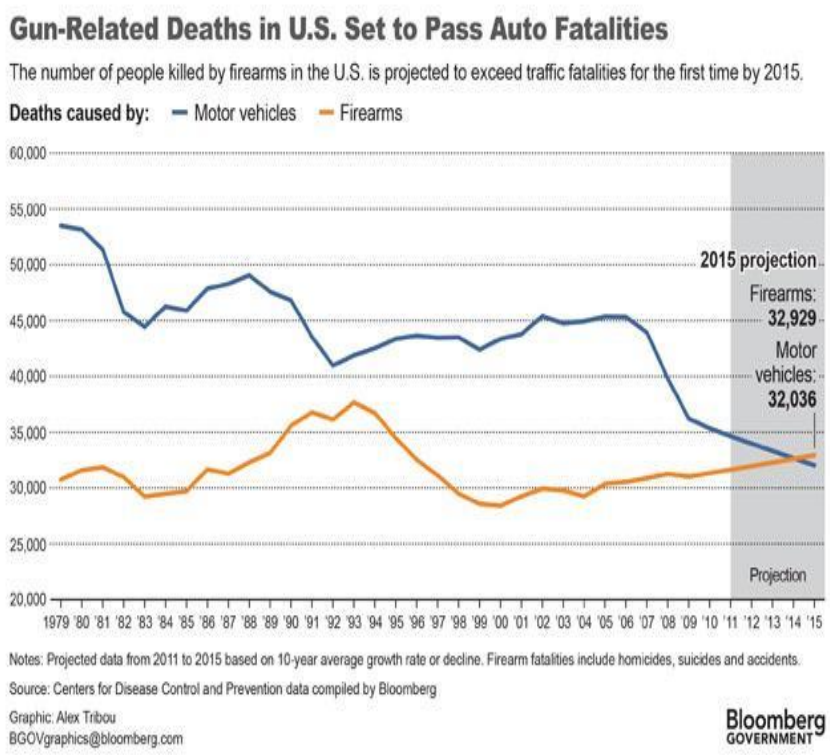
In 2011, CDC reported, 851 deaths due to accidental discharge of firearms, 38,285 deaths by suicide, 19,766 (51%) of which were by discharge of firearms, and 15,953 homicides, 11,101 (69%) of which were committed by discharge of firearms.

The 851 accidental firearm discharge death number is an amazingly low number considering there are 93 guns for every 100 people in the U.S. (not including the military and law enforcement - which would essentially make the ratio 1/1); 350,000,000 guns with less than 1,000 accidental deaths annually. However, this remarkably low number represents 851 preventable deaths and could create a source of lifelong negative physical, emotional and social consequences for family members.

Parents of a 3 year old had gotten out of their vehicle to look at a motorcycle for sell. The 3 year old was left in the vehicle alone. The parents heard a "pop" and looked in the vehicle to discover their 3 year old was dead from a gunshot wound to his head. The firearm belonged to one of the parents and was not properly stored. The firearm was loaded and had been hidden under the front seat. The cause of death was accidental due to gunshot wound to the head with massive cerebral trauma and the manner of death was accidental.

The South Carolina Department of Health and Environmental Control's, SCAN reports 23 unintentional firearm related deaths in 2011 with 5 deaths occurring to individuals 0 to 17 years of age. The South Carolina Department of Education in its *2011 Youth Risk Behavior Survey* reports 10% of high school students carried a gun to school in the past 30 days, and that white male high school students were more likely than black male students to have carried a weapon.

Nonfatal Firearm-Related Injuries – In the June 7, 2013 publication of the American Academy of Pediatrics, article, "*Firearm-Related Injuries Affecting the Pediatric Population*"[xv], data gathered from emergency departments in the 66 hospitals in the National Electronic Injury Surveillance System All-Injury Program, revealed an estimated 73,505 people of all ages were treated for nonfatal firearm-related injuries in US hospital emergency departments in 2010. Among them were 15,576 children and adolescents younger than 20 years. Of those, 6,236 (40%) required hospitalization for their injuries. Adolescents 15 to 19 years of age had nonfatal firearm injury rates nearly 3 times that of the general population (62.9 vs 23.9 per 100 000). Most (79%) of the nonfatal injuries to adolescents were attributable to assault, and assault-related injuries were responsible for 84.5% of hospitalizations. In SC, 1,184 people were treated for firearms-related injuries in emergency departments in 2011. Of those, 493 (42%) were between the ages of 15 and 24 years of age. Overall, males accounted for 90% of firearm-related emergency department visits.



Prevention Points:

In Your Home

- Before you buy a gun, consider less dangerous ways to keep your family and property safe, such as burglar alarms, window locks, dogs, etc.
- Don't buy a gun unless you have the necessary knowledge to use it safely.
- Firearms should be stored unloaded and in a locked place.
- Firearms should be locked up in a place that children cannot reach since children often have trouble telling the difference between a toy gun and a real gun.
- Bullets should be locked up in a place separate from where guns are secured.
- Trigger locks can be a helpful additional precaution for unloaded firearms. They must be applied to an unloaded firearm.
- Some locks can be removed in as few as 6 seconds.
- If you keep an unlocked gun under your pillow at night, lock it in the morning before you go to work.

Teach Your Children

- Explain to children that guns are dangerous and that they should never touch guns without your permission.
- Talk to your children about the difference between the violence that they see on television or in the movies and real-life violence, where adults and children really get hurt.
- Tell your children that if they find a gun anywhere they should not touch it and should leave the area and go tell an adult. If they are in school and know of other children carrying a handgun they should tell an adult.

Resources:

- Law Center to Prevent Gun Violence - http://smartgunlaws.org/gun-law-statistics-and-research/
- Injury Free Coalition for Kids - http://www.injuryfree.org/resources/FirearmInjuryPreventionChecklist.pdf

Poisoning - A poison is any substance, including medications, that is harmful to your body if too much is eaten, inhaled, injected or absorbed through the skin. Any substance can be poisonous if too much is taken.

The CDC reports that every day in the United States, 87 people die as a result of unintentional poisoning and another 2,277 are treated in emergency departments (ED). Poisonings are either intentional or unintentional. If the person taking or giving a substance did not mean to cause harm, then it is an unintentional poisoning.

Unintentional poisoning includes the use of drugs or chemicals for nonmedical purposes in excessive amounts, such as an "overdose." It also includes the excessive use of drugs or chemicals for non-recreational purposes, such as by a toddler.

2011 - SCFAC Case Review	
Cases Assigned:	169
Cases Closed:	93
Poisoning:	1

Among children, emergency department visits for medication poisonings (excluding misuse or abuse) are twice as common as poisonings from other household products (such as cleaning solutions and personal care products).[xvi]

The South Carolina Department of Health and Environmental Control's, SCAN reports, 527 poison-related deaths in 2011 with 4 deaths occurring to individuals 0 to 17 years of age.

Latest Poison News Alerts can be obtained by visiting the American Association of Poison Control Centers at: http://www.aapcc.org/

Prevention Points:

Drugs and Medicines

- Only take prescription medications that are prescribed to you by a healthcare professional. Misusing or abusing prescription or over-the-counter medications is not a "safe" alternative to illicit substance abuse.
- Never take larger or more frequent doses of your medications, particularly prescription pain medications, to try to get faster or more powerful effects.
- Never share or sell your prescription drugs. Keep all prescription medicines (especially prescription painkillers, such as those containing methadone, hydrocodone, or oxycodone), over-the-counter medicines (including pain or fever relievers and cough and cold medicines), vitamins and herbals in a safe place that can only be reached by people who take or give them.
- Follow directions on the label when you give or take medicines. Read all warning labels. Some medicines cannot be taken safely when you take other medicines or drink alcohol.
- Turn on a light when you give or take medicines at night so that you know you have the correct amount of the right medicine.
- Keep medicines in their original bottles or containers.
- Monitor the use of medicines prescribed for children and teenagers, such as medicines for attention deficit hyperactivity disorder (ADHD).
- Dispose of unused, unneeded or expired prescription drugs.

Household Chemicals and Carbon Monoxide

- Always read the label before using a product that may be poisonous.
- Keep chemical products in their original bottles or containers. Do not use food containers such as cups, bottles or jars to store chemical products such as cleaning solutions or beauty products.
- Never mix household products together. For example, mixing bleach and ammonia can result in toxic gases.
- Wear protective clothing (gloves, long sleeves, long pants, socks, shoes) if you spray pesticides or other chemicals.
- Turn on the fan and open windows when using chemical products such as household cleaners.

Keep Young Children Safe from Poisoning

Be Prepared

- Put the poison help number, 1-800-222-1222, on or near every home telephone and save it on your cell phone. The line is open 24 hours a day, 7 days a week.

Be Smart about Storage

- Store all medicines and household products up and away and out of sight in a cabinet where a child cannot reach them.
- When you are taking or giving medicines or are using household products:
  - ✓ Do not put your next dose on the counter or table where children can reach them—it only takes seconds for a child to get them.
  - ✓ If you have to do something else while taking medicine, such as answer the phone, take any young children with you.
  - ✓ Secure the child safety cap completely every time you use a medicine.
  - ✓ After using them, do not leave medicines or household products out. As soon as you are done with them, put them away and out of sight in a cabinet where a child cannot reach them.
  - ✓ Be aware of any legal or illegal drugs that guests may bring into your home. Ask guests to store drugs where children cannot find them. Children can easily get into pillboxes, purses, backpacks, or coat pockets.

Other Tips

- Do not call medicine "candy."
- Identify poisonous plants in your house and yard and place them out of reach of children or remove them.

Resources

- American Association of Poison Control Center - http://www.aapcc.org/prevention/children/
- Household Hazardous Materials: A Guide for Citizens - http://training.fema.gov
- North American Guidelines for Children's Agricultural Tasks - http://www.nagcat.org

Asphyxiation (Suffocation/Strangulation) — is defined as, to die from lack of respiration. This includes inhalation and ingestion of food or object, which cause the obstruction of the respiratory tract or suffocation. This group also includes accidental mechanical suffocation (e.g. by plastic bag, closed up in air tight place, accidental hanging).

An exhausted mother laid her 4 month old baby in the bed with her at 3:00 a.m. after feeding him. When she awoke at 6:00 a.m. she discovered she had rolled over on her baby. The baby was blue and not breathing. The cause of death was suffocation due to unsafe sleeping. The manner of death was accidental.

2011 - SCFAC Case Review

Cases Assigned:	**169**
Cases Closed:	**93**
Asphyxiation:	**8**

Positional asphyxia happens when a person can't get enough air to breathe due to the positioning of his/her body. This happens most often in infants, when an infant

dies and is found in a position where his/her mouth and nose is blocked, or where his/her chest may be unable to fully expand. It is felt that the positioning of the infant led to a lack of oxygen and a death by asphyxia (suffocation.) Examples include infant found wedged between a mattress and the wall, an infant sleeping on a couch, with an adult, who is found with his face pushed against the cushions of the couch.

Positional asphyxia varies from Sudden Infant Death Syndrome (SIDS) in a few important ways. A child is said to die of SIDS if he/she:

- is less than 1 year of age,
- died while sleeping and that death remains unexplained after a thorough investigation, including a complete autopsy and review of the circumstances of death and clinical history.

A father gave his 2 year old a peanut. The child swallowed the peanut and it became lodged in his throat. The parents tried to remove the peanut and were unsuccessful. The child was taken to the local hospital where attempts to resuscitate were unsuccessful. An autopsy revealed foreign material, a peanut, was lodged in the child's airway. The cause of death was airway obstruction. The manner of death was accidental.

Prevention Points:

- Place baby on a firm flat surface without pillows, wedges or toys during sleeping.
- Place baby on their back while sleeping or napping.
- Remove cords and drawstrings from a child's clothing.
- Place all plastic bags or wrapping where children cannot reach them.
- Check floors for small objects such as buttons, beads, marbles or coins.
- Avoid giving small, firm food items such as hot dogs, grapes, peanuts, popcorn kernels and carrots.

Resources:

- Centers for Disease Control and Prevention – http://www.cdc.org
- American Academy of Pediatrics – http://www.aap.org
- U. S. Consumer Product Safety Commission – http://www.cpsc.gov
- National Safety Council – http://www.nsc.org
- Baby your Baby - http://babyyourbaby.org/infants/positional-asphyxia.php

Transportation (Private Property Only): Although motor vehicle traffic is the number one cause of accidental injury deaths among youth, the Committee does not review these deaths unless they are a result of an injury on private property or injury involving a pedestrian. However, the South Carolina Department of Public Safety (SCPS) investigates all motor vehicle traffic deaths.

2011 - SCFAC Case Review

Cases Assigned:	**169**
Cases Closed:	**93**
Transportation-Private Property:	**5**

Table 5: South Carolina Traffic Fatalities Ages 18 and Under, 2010, Preliminary 2011-2012*

Unit Type	2010	2011	2012	Total
Motor Vehicle	69	59	55	183
Bicycle	1	2	1	4
Pedestrian	8	11	12	31
Motorcycle	2	5	4	11
Other Motorbike (Moped, dirt bike, etc)	0	3	2	5
Other (ATV, golf cart, etc)	1	0	0	1
Total	**81**	**80**	**74**	**235**

Data for 2011 and 2012 is preliminary and subject to change
**Data Source: SC Department of Public Safety*

State Information 0-17 population:

All-terrain vehicle usage has become popular for both recreation and work. Their size, maneuverability, and durability make them extremely handy and fun to ride. Unfortunately, each year in the United States more than 100 children ages 16 and under are killed and approximately 45,000 are injured on All-Terrain Vehicles (ATVs). Young riders lack the size and strength to safely control an ATV. ATV drivers often travel on roadways which are not designed for ATV travel and driving at speeds that are unsafe. The American Academy of Pediatrics recommends that no one under 16 years of age ride ATVs or other motorized vehicles. Manufacturers warn that full-sized ATVs are not designed for those under 16 years of age to operate. Please also refer to SC Code **50-26-40** restrictions on use of all-terrain vehicle (ATV).

"It is a very sad way of ending a Memorial Day Holiday and my prayers go out to this family and the child driver", stated the neighbor of the 12 year old. The child was killed while riding on the back of an ATV driven by his 13 year old cousin. Neither of the children were wearing helmets and the cause of death was blunt force trauma to the head.

In recent years, golf carts have become popular with older and younger drivers. They are no longer used solely on golf courses, but rather in their communities. The carts are a convenient and energy efficient way for residents to get around, but they come with risk. According to the Consumer Products Safety Commission (CPSC), there are approximately 15,000 golf cart related emergency room visits in the United States every year. Based on the CPSC statistics, 40% of the injuries involve a person falling out of a cart and occur to children under the age of 16. Please also refer to SC Code **56-2-105** golf cart permit and the operation of a golf cart.

Prevention Points:

ATV safety:

- Attend an ATV driver's safety course.
- Never use a 3-wheeler. They are unsafe and are no longer manufactured.
- Ride an age-appropriate ATV.

- Provide constant supervision when a child is operating an ATV.
- Never carry passengers. ATVs are designed for one person.
- Do not use ATVs on the streets or at night.
- Always wear an approved helmet with eye protection.
- Wear non-skid, closed toe shoes.
- Wear long pants and a long-sleeve shirt.
- Never operate an ATV under the influence of drugs or alcohol.

Golf Cart Safety:

- If children ride on a golf cart without seat belts, mounted hand holds should be provided to reduce the possibility of ejection.
- Additions of seat belts, doors and netting can be used to improve occupant retention.

Resources:

- Injury Free Coalition for Kids – http://www.injuryfree.org
- Consumer Product Safety Commission – http://www.cpsc.gov

Other: 8 deaths occurred in children from other manners to include: animal attacks, crushing, fall, struck by falling object, hyperthermia and overdose.

2011 - SCFAC Case Review	
Cases Assigned:	169
Cases Closed:	93
Other:	8

4. Natural

Natural deaths can be attributed to diseases and conditions such as cardiac arrhythmia, meningitis, myocarditis, pneumonia and sickle cell. Metabolic disorders and birth defects also contribute to the cause of death among children. Many natural deaths are not preventable; however, some are preventable.

2011 - SCFAC Case Review	
Cases Assigned:	169
Cases Closed:	93
Natural:	18

A natural death may occur suddenly, unexpectedly or progressively due to an underlying condition that is unknown to the guardian of a child. Many times the cause of death is undetectable until a thorough autopsy is performed.

Sickle Cell Disease (SCD) is a group of inherited red blood cell disorders. Healthy red blood cells are round, and they move through small blood vessels to carry oxygen to all parts of the body. If someone has SCD, the red blood cells become hard and sticky and look like a C-shaped farm tool called a "sickle". The sickle cells die early, which causes a constant shortage of red blood

cells. Pain is the most common complication of SCD, and the top reason that people with SCD go to the emergency room or hospital. When sickle cells travel through small blood vessels they can get stuck and clog the blood flow. This causes pain that can start suddenly, be mild to severe and can last for any length of time. However, people with SCD can live full lives and enjoy most of the activities that other people do.

People with SCD, especially infants and children, are more at risk for harmful infections. Pneumonia is a leading cause of death in infants and young children with SCD.

Prevention Points:

Vaccines can protect against harmful infections.

- Babies and children with SCD should have all of the recommended childhood vaccines, plus a few extra. The extra ones are:
  - ✓ Flu vaccine (influenza vaccine) every year after 6 months of age.
  - ✓ A special pneumococcal vaccine (called 23-valent pneumococcal vaccine) at 2 and 5 years of age.
  - ✓ Meningococcal vaccine, if recommended by a doctor.

- In addition, children with SCD should receive a daily dose of penicillin, an antibiotic medicine, to help prevent infections. This can begin at 2 months of age and continue until the child is at least 5 years of age.

Sickle Cell Trait - People who inherit one sickle cell gene and one normal gene have *sickle cell trait* (SCT). People with SCT usually do not have any of the symptoms of sickle cell disease (SCD), but they can pass the trait on to their children.

Sickle Cell Trait and Athletes - Some people with SCT have been shown to be more likely than those without SCT to experience heat stroke and muscle breakdown when doing intense exercise, such as competitive sports or military training under unfavorable temperatures(very high or low) or conditions.

Studies have shown that the chance of this problem can be reduced by avoiding dehydration and getting too hot during training.

People with SCT who participate in competitive or team sports (i.e. student athletes) should be careful when doing training or conditioning activities.

Prevention Points:

- Set your own pace and build your intensity slowly.
- Rest often in between repetitive sets and drills.
- Drink plenty of water before, during and after training and conditioning activities.

- Keep the body temperature cool when exercising in hot and humid temperatures by misting the body with water or going to an air conditioned area during breaks or rest periods.
- Immediately seek medical care when feeling ill.

Resources:

- Centers for Disease Control - http://www.cdc.gov/ncbddd/sicklecell/index.html
- American Academy of Pediatrics – http://www.aap.org
- National Institutes of Health - http://www.ghr.nlm.nih.gov/condition/sickle-cell-disease

5. Undetermined

2011 - SCFAC Case Review	
Cases Assigned:	169
Cases Closed:	93
Undetermined:	15

The Undetermined category includes cases that have been investigated, but a manner of death cannot be determined based on the available information surrounding each case. Often, multiple causes are possible, but neither can be conclusively proven (ex: SIDS vs. Overlay vs. Intentional Suffocation). Sudden Infant Death Syndrome (SIDS) is defined by the American Academy of Pediatrics (AAP) as the sudden death of an infant less than 1 year of age, which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene and review of the clinical history.

A 21 year old mother stated, "I laid my 4 month old baby down for a nap and covered him with a blanket. When I checked on him, he was not breathing."

Many sleep related infant deaths occur in a manner consistent with SIDS, but case investigation shows that the child was in a potentially unsafe sleep situation at the time of death. In these cases, it is not possible to rule out accidental suffocation, which means the diagnosis of SIDS or intentional suffocation could not be made. Therefore, the official cause of death is listed as "undetermined" following complete autopsy and thorough investigation.

The AAP has placed an increased emphasis on issues related to SIDS deaths. Co-sleeping with adults or older children, sleeping on waterbeds or couches having pillows, stuffed animals or excess bedding in the same bed with an infant can be hazardous. The side-sleeping position is not an acceptable alternative to the prone position due to the infant's potential to roll from his or her side into the prone position.

Nationally, SIDS is the leading cause of death for babies 1 to 12 months of age; the peak age for SIDS death is 2 to 4 months of age; 90% occur between 1 to 6 months of age.

Despite a major decrease in the incidence of SIDS, since the AAP released its recommendation in 1992 that infants be placed for sleep in a non-prone position, this decline has plateaued in recent years. Concurrently, other causes of sudden unexpected infant death that occur during sleep (sleep-related deaths), including suffocation, asphyxia, and entrapment, and ill-defined or unspecified causes of death have increased in incidence. It has become increasingly important to address these other causes of sleep-related infant death. Many of the modifiable and non-modifiable risk factors for SIDS and suffocation are strikingly similar. The AAP therefore is expanding its recommendations from focusing only on SIDS to focusing on a safe sleep environment that can reduce the risk of all sleep-related infant deaths including SIDS.

Table 6, Infant Mortality for Sudden Infant Death Syndrome for South Carolina Residents, provides the number of deaths for years 1992 through 2011 and rates.

Table 6: Infant Mortality from Sudden Infant Death Syndrome

Infant Mortality For South Carolina Residents County: All Counties in South Carolina Infant Mortality Variables: Sudden Infant Death Syndrome (R95)* (798.0)**		
Year	Frequency	Rate
1992	77	137.3
1993	70	130.3
1994	50	96.3
1995	51	100.2
1996	40	78.3
1997	47	90.0
1998	51	94.7
1999	51	93.2
2000	37	66.1
2001	38	68.2
2002	37	67.9
2003	33	59.5
2004	29	51.3
2005	48	83.4
2006	44	70.7
2007	46	73.1
2008	57	90.4
2009	44	72.5
2010	49	84.0
2011	45	78.5
1992-2011	944	83.9

Cause Specific Rate Calculated per 100,000 Live Births

Data Source: Division of Biostatistics, SC DHEC

Prevention Points:

Level A Recommendations:

- Always place baby on his or her back to sleep, for naps and at night.
- Use a firm sleep surface.
- Room-sharing without bed-sharing is recommended.
- Keep soft objects and loose bedding out of the crib.
- Pregnant women should receive regular prenatal care.
- Avoid smoke exposure during pregnancy and after birth.
- Avoid alcohol and illicit drug use during pregnancy and after birth.
- Breastfeeding is recommended.
- Consider offering a pacifier at nap time and bedtime.
- Avoid overheating.
- Do not use home cardiorespiratory monitors as a strategy for reducing the risk of SIDS.
- Expand the national campaign to reduce the risks of SIDS to include a major focus on the safe sleep environment and ways to reduce the risks of all sleep-related infant deaths, including SIDS, suffocation and other accidental deaths; pediatricians, family physicians, and other primary care providers should actively participate in this campaign.

Level B Recommendations:

- Infants should be immunized in accordance with recommendations of the AAP and Centers for Disease Control and Prevention.
- Avoid commercial devices marketed to reduce the risk of SIDS.
- Supervised, awake tummy time is recommended to facilitate development and to minimize development of positional plagiocephaly.

Level C Recommendations:

- Health care professionals, staff in newborn nurseries and NICUs, and child care providers should endorse the SIDS risk-reduction recommendations from birth.
- Media and manufacturers should follow safe-sleep guidelines in their messaging and advertising.
- Continue research and surveillance on the risk factors, causes, and pathophysiological mechanisms of SIDS and other sleep-related infant deaths with the ultimate goal of eliminating these deaths entirely.

These recommendations are based on the US Preventive Services Task Force levels of recommendation (http://www.uspreventiveservicestaskforce.org/uspstf/grades.htm).

Level A: Recommendations are based on good and consistent scientific evidence (i.e., there are consistent findings from at least 2 well-designed, well-conducted case-control studies, a systematic review, or a meta-analysis). There is high certainty that the net benefit is substantial and the conclusion is unlikely to be strongly affected by the results of future studies.
Level B: Recommendations are based on limited or inconsistent scientific evidence. The available evidence is sufficient to determine the effects of the recommendations on health outcomes, but confidence in the estimate is constrained by such factors as the number, size or quality of individual studies or inconsistent findings across individual studies. As more information becomes available, the magnitude or direction of the observed effect could change and this change may be large enough to alter the conclusion.
Level C: Recommendations are based primarily on consensus and expert opinion.

Resources:

- SIDS Network – http://www.SIDS-network.org
- Back to Sleep Campaign – http://www.nichd.nih.gov/sids
- American Academy of Pediatrics – http://www.aap.org
- CJ Foundation for SIDS – http://www.cjsids.com
- American Sudden Infant Death Syndrome Institute – http://www.sids.org
- National Sudden and Unexpected Infant/Child Death Resource Center – http://www.sidscenter.org
- National Sudden and Unexpected Infant/Child Death and Pregnancy Loss Program Support Center - http://www.firstcandle.org
- National Adolescent Health Information Center Unintentional Injury Fact Sheet – http://www.childdeathreview.org
- The Consumer Product and Safety Commission – http://www.cpsc.gov

V. Appendices

1. Child Death Investigations

Any child death under the age of 18 is investigated when the death is unexpected and unexplained including, but not limited to, possible sudden infant death syndrome; as a result of violence, when unattended by a physician and in any suspicious or unusual manner. When a child dies, the response by the State and the community must include an accurate and complete determination of the cause of death to include a thorough scene investigation and a complete autopsy. Lack of adequate investigations of child deaths impedes the effort to prevent future deaths from similar causes.

Multi-disciplinary and multi-agency reviews of deaths can assist the State in the investigation of child deaths, in the development of a greater understanding of the incidence and causes of child death and the methods for preventing such deaths and identifying gaps in services to children and families. Law enforcement, coroners, public health officials, educators, medical personnel, social workers and mental health providers must collaborate on child death investigations. This cooperation increases the ability to accurately identify the cause and manner of child fatalities.

The American Academy of Pediatrics describes an adequate death investigation as including a complete autopsy, investigation of circumstances of death, review of the child's medical and family history and review of information from relevant agencies and health care professionals. An autopsy is essential in order to determine the cause and manner of death and toxicology samples are necessary to indicate the presence of drugs and/or alcohol. When an autopsy is not performed, it greatly limits the investigation and the Committee's ability to gain insight into the death to make recommendations to prevent future deaths. A thorough death scene investigation by law enforcement and the coroner is essential. Available are child death scene investigation protocols from various sources, coroner's protocols and initial intake sheets.

In the state of South Carolina, the State Law Enforcement Division provides, upon request, assistance in the sometimes lengthy investigations of child deaths. Services include the assistance of experienced crime scene investigators, (CSI) that can assist local agencies in documenting and gathering evidence from a child death scene and/or autopsy. Local agencies can also request the use of the SLED Toxicology Department. Child Fatality cases have preliminary testing completed with 48 hours (most are within 24 hours). More comprehensive testing is completed within two weeks (unless further specialized testing is required). The 24 – 48 hours turnaround time is provided on all Child Fatality cases that are visibly marked and noted as a child fatality case. The preliminary results will be called to the coroner upon request and these services are provided free of charge. The State Law Enforcement Division also provides experienced investigators from the Special Victims Unit (SPU), that are specially trained in the investigation of child death, to assist in every step of the investigation from the initial scene to the final court date.

2. Injury Fatalities ICD Codes

Cause of Injury Death	ICD-9	ICD-10
All Injury	E800-E869, E880-E929, E950-E999	V01–Y36, Y85–Y87, Y89, *U01-*U03
Suicide	E950-E959	X60–X84, Y87.0
Homicide	E960-E969	X85–Y09, Y87.1
Unintentional	E800-E869,E880-E929	V01–X59, Y85–Y86
Cut or pierce	E920	W25–W29, W45, W46
Drowning	E830,E832,E910,E954,E964,E984	W65–W74
Fall	E880-E886,E888	W00–W19
Fire or hot object	E890-E899	X00–X19
Firearm	E922	W32–W34
Machinery	E919	W24, W30–W31
Motor Vehicle Traffic	E810-E819	[V02–V04](.1,.9), V09.2, [V12–V14](.3–.9), V19(.4–.6), [V20–V28](.3–.9), [V29–V79](.4–.9), V80(.3–.5), V81.1, V82.1, [V83–V86](.0–.3), V87(.0–.8), V89.2
Pedal cyclist, other	[E800–E807](.3),[E820–E825](.6),E826(.1,.9)	V10–V11, [V12–V14](.0–.2), V15–V18, V19(.0–.3,.8,.9)
Pedestrian, other	[E800–E807](.2), [E820–E825](.7), [E826–E829](.0)	V01, [V02–V04](.0), V05, V06, V09(.0–.1,.3,.9)
Natural or environmental	E900.0–E909, E928(.0–.2)	W42–W43, W53–W64, W92–W99, X20–X39, X51–X57
Overexertion	E927	X50
Poisoning	E850–E869	X40–X49
Struck by or against	E916–E917	W20–W22, W50–W52
Suffocation	E911–E913	W75–W84
Other specified, unspecified	E846–E848, E887, E914–E915, E918, E921(.0–.9), E923(.0–.9), E925.0–E926.9, E928(.8,.9),E929(.0–.5,.8,.9)	W23, W35–W41, W44, W49, W85–W91, X58, X59, Y85, Y86
Legal intervention	E970–E978,E990–E999	Y35–Y36, Y89(.0,.1)
Undetermined	E980–E989	Y10–Y34, Y87.2, Y89.9

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